

## REMARKS

The present application was filed on February 16, 2001 with claims 1 through 15. Claims 1 through 15 are presently pending in the above-identified patent application. Claims 5 and 6 are proposed to be cancelled and claims 1-4 and 7-15 are proposed to be amended herein.

In the Office Action, the Examiner rejected claims 1-15 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner also rejected claims 1, 2-5, 8, 10-12, 14, and 15 under 35 U.S.C. §102(e) as being anticipated by Nomura (United States Patent Number 6,448,810 B1) and rejected claims 1-15 under 35 U.S.C. § 102(b) as being anticipated by Okazaki (United States Patent Number 5,214,330).

The present invention is directed to a bidirectional bus repeater that connects individual segments of a bidirectional bus. The exemplary bidirectional bus repeater consists of a direction control block and a buffer block. The buffer block contains one pair of buffers for each bus bit and an extra pair associated with the indicator lines. Indicator lines are used by the direction control block based on activity on the bus to generate control signals (control-A and control-B) that control the state of the tri-state buffers. In an exemplary embodiment, each node must toggle the indicator line whenever the node drives the bus. When the bus is inactive, the control-A and control-B signals generated by the direction control block are both inactive because the voltages on both sides of the bidirectional bus repeater are the same.

Section 112 Rejections

Claims 1-15 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In particular, the Examiner asserts that claims 1-7 and claims 8-11 are directed to a device and that “the essential structural cooperative relationships between elements recited in the claims have been omitted, such omission amounting to a gap between the necessary structural connections.” The Examiner did not make any assertions regarding claims 12-15. The Examiner also asserts that claims 4 and 5 are identical.

Claims 1-11 have been amended to more particularly point point out and distinctly claim the subject matter which applicant regards as the invention. Claim 5 has been cancelled. Applicants believe that these amendments address the Examiner's concerns under section 112, second paragraph, and respectfully request that the rejections under section 112, second paragraph, be withdrawn.

Independent Claims 1, 8 and 12

Independent claims 1, 8, and 12 were rejected under 35 U.S.C. §102(e) as being anticipated by Nomura and were rejected under 35 U.S.C. §102(b) as being anticipated by Okazaki.

Regarding claim 1, the Examiner asserts that Nomura teaches a pair of buffers (111, 112) for each bit on said bidirectional bus, each buffer in the pair transferring data in a given direction on the bidirectional bus based on a direction control signal. The Examiner also asserts that Okazaki teaches a pair of buffers (11, 12) for each bit on said bidirectional bus, each buffer (11, 12) in the pair transferring data in a given direction on the bidirectional bus based on a direction control signal.

Applicants note that Nomura teaches that control signals S141, S142, S143 are required to enable the bi-directional repeaters 111, 112 (see, FIG. 2). The control signals S141, S142, S143 must remain active to enable the bi-directional repeaters 111, 112 and the bi-directional repeaters 111, 112 will remain active until the control signals S141, S142, S143 are inactive. Independent claims 1, 8, and 12, as amended, require a pair of indicator signals, wherein a *single voltage change on one of said indicator signals causes each of said pair of buffers to transfer data in a given direction for a finite period of time.*

Applicants also note that Okazaki teaches that the buffer 12 will remain inactive and the buffer 11 will remain active for as long as signal A is active. See FIGS. 1 and 2; col. 3, lines 12-25. Independent claims 1, 8, and 12, as amended, require a pair of indicator signals, wherein a *single voltage change on one of said indicator signals causes each of said pair of buffers to transfer data in a given direction for a finite period of time.*

Thus, Nomura or Okazaki, alone or in combination, do not disclose or suggest "a pair of indicator signals, wherein a single voltage change on one of said

indicator signals causes each of said pair of buffers to transfer data in a given direction for a finite period of time, as required by independent claims 1, 8, and 12.

Dependent Claims 2-7, 9-11 and 13-15

5 Dependent claims 2-5, 10-11, 14, and 15 were rejected under 35 U.S.C. §102(e) as being anticipated by Nomura and rejected claims 2-7, 9-11, and 13-15 were rejected under 35 U.S.C. § 102(b) as being anticipated by Okazaki.

10 Claims 2-4, 7, 9-11 and 13-15 are dependent on claims 1, 8, and 12, respectively, and are therefore patentably distinguished over Nomura and Okazaki (alone or in any combination) because of their dependency from amended independent claims 1, 8, and 12 for the reasons set forth above, as well as other elements these claims add in combination to their base claim. Claims 5 and 6 have been cancelled.

All of the pending claims, i.e., Claims 1-15, are in condition for allowance and such favorable action is earnestly solicited.

15 If any outstanding issues remain, or if the Examiner has any further suggestions for expediting allowance of this application, the Examiner is invited to contact the undersigned at the telephone number indicated below.

The Examiner's attention to this matter is appreciated.

Respectfully submitted,



20 Date: November 26, 2003

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